Sick of the Flu?

Dr. Bob England, Director, Maricopa County Public Health July 14, 2010 Written originally for John C. Lincoln's Physician Newsletter

Are you sick of talking about the flu? Yeah, me too, but I'll bet I'm tired of it for a different reason than some of you. (Read on for the answer.)

This could be a big flu season in multiple ways. First of all, there's the likelihood that the novel H1N1 strain of the pandemic will return in a modified form during the next regular flu season. That's why the H1N1 component of this year's trivalent flu vaccine is against that same novel strain. Whether it would continue to disproportionately affect younger persons is unknown, of course, and how the public might react to hearing about that strain coming back is an open question.

On top of that, the Advisory Committee on Immunization Practices and the CDC have finally recommended flu vaccine for *everyone*. So please do encourage *all* of your patients to get it.

We learned some important lessons during the pandemic last year. Coupled with existing data about regular flu seasons, they lead to an inescapable conclusion.

Just like the way other vaccines work, the key is building "herd immunity."

The individual benefit from a vaccine is not nearly as great as the benefit we all get when most others are also immunized. Simply put, when enough people in a group are immune, the germ has a hard time finding the next host to which it can jump. Outbreaks don't happen, individual spread is much less. And your immunity from the vaccine you got never even gets put to the test, because you're never exposed.

That's how we made formerly common diseases like measles, mumps, rubella, polio, and diphtheria so rare. The gradual loss of the herd effect to pertussis (whooping cough) due to waning immunity is the reason we see it beginning to make a comeback, and that's why all older children and adults, including healthcare workers should be up to date with Tdap, so that we rebuild that herd effect and thus protect those most vulnerable (in the case of pertussis, those most vulnerable are young children).

This is hugely important for seasonal flu. Those at highest risk for serious disease and/or complications of the flu tend to be older adults or are otherwise infirmed. While the individual protection afforded by a flu shot is ~80% in young, healthy persons, it plummets to as low as ~30% in those who are most at risk. It is craziness to try to stop the serious effects of such a widespread disease by focusing our efforts only on vaccinating those who are most at risk, in whom the vaccine is least effective. That's not to say don't bother vaccinating them, but it is far more important to vaccinate others around those most vulnerable persons, so they are much less likely to be exposed.

If we can't get it together to make enough vaccine and convince everyone to use it, then who should we focus our efforts on? Who do we target to prevent spread of disease to those who are most at risk?

Look in the mirror.

No one is more likely to be exposed to the flu and then shed virus to those most vulnerable than are health care workers. There have been numerous health care facility outbreaks linked directly to health care workers. Increased death rates have been associated with unvaccinated health care workers. Like many diseases, there is an asymptomatic carrier rate, which depending on the strain seems to vary between 20% and 60% of all flu infections, so very often we can be shedding virus and not even know it.

This is why I'm tired of talking about the flu. Because the toll is so huge, and the solution to part of the problem is so simple, and yet we seem to simply not bother.

We all worked very hard to train to do what we do. You work very hard to help your patients. The last thing you want to do is accidentally kill one of them because you didn't think you needed flu vaccine. You may not need it. But your patients need you to take it. Do it for them.

And while you're at it, everyone in the household or around higher risk persons needs to be vaccinated against the flu, too. Be sure and remind them, if not for themselves, to get vaccinated to help protect Grandma.